

IN THE CLAIMS:

Please amend claims 1-18 as set forth below in the "Listing of Claims".

Please add new claims 19-45 as set forth below in the "Listing of Claims".

LISTING OF CLAIMS

1. (Currently Amended) A liquid sensor ~~in which~~ comprising:
a container [[is]] filled with an electrically conductive liquid; [[,]]
~~a part of an electrode including a part~~ having a surface formed with a dielectric film,
the electrode being [[is]] brought into contact with the conductive liquid [[,]] so that a change
in a contact area of the electrode with the conductive liquid with movement of a surface of
the conductive liquid is measured from a change in a capacitance between the electrode and
the conductive liquid [[,]] and so that a change in a tilt angle of the electrode to the liquid
surface or an acceleration applied to the container is detected from a measured value, wherein
~~characterized in that the dielectric film comprises a silicon oxide film is used as the dielectric~~
~~film.~~

2. (Currently Amended) A capacitance type liquid sensor comprising:
~~characterized by~~
a cylindrical closed container [[(6)]] made from an electrically insulating material and
having two sides (2, 3) parallel to each other, the sides having respective openings (13, 14)
formed therein, the container being filled with a conductive liquid;
a plurality of plate-shaped main electrodes (4, 5) each having at least one side formed
with a silicon oxide film, the main electrodes being in abutment with said sides while the
silicon oxide films face an inside of the container, thereby closing the openings; [[, and]]
a sealing agent [[(28)]] interposed in a gap between the main electrodes and said sides
for fluid tightness respectively; [[,]] and
an auxiliary electrode provided in the container to be brought into electrical contact
with the conductive liquid, wherein ~~in that~~ the conductive liquid (7) ~~filling the container~~ has
an amount corresponding to substantially one half of a content volume of the container, ~~and~~

~~further characterized by an auxiliary electrode (8) provided in the container to be brought into electrical contact with the conductive liquid.~~

3. (Currently Amended) A capacitance type liquid sensor comprising:
~~characterized by~~

a cylindrical container ~~[[6]]~~ made from an ~~electrically~~ electrical insulator and having two sides (2,3) parallel to each other and upper and lower openings (9,10) closed by lids (11,12) respectively, said sides having vertically extending rectangular openings (13,14) formed in the sides;[[,]]

a plurality of notches (19,20) formed by cutting out corners (17,18) located outside the container with respect to all end faces of the openings so that plate-shaped members are capable of being fitted in the notches;[[,]]

a plurality of plate-shaped electrodes (4,5) having at least one ~~sides~~ side formed with silicon oxide films and fitted in the notches so as to abut against bottoms (23,24) of the notches with the oxide films facing an inside of the container;[[,]]

a sealing agent ~~[[28]]~~ provided for fluid tightness in gaps defined between the bottoms of the notches and the plate-shaped electrodes and gaps defined between outer peripheral sides of the plate-shaped electrodes and sides of the notches;[[,]]

an electrically conductive liquid ~~[[7]]~~ having an amount equal to substantially one-half of an inside volume of the container and filling the container;[[,]] and

an auxiliary electrode bar ~~[[8]]~~ made from a metal and extending through substantially a central part of the upper lid (11) so that a distal end thereof is immersed sufficiently deep in the conductive liquid.

4. (Currently Amended) The capacitance type liquid sensor according to claim 2, wherein ~~characterized in that~~ the cylindrical container is formed into a square cylindrical shape and has two pairs of parallel sides, the four parallel sides having openings closed by plate-shaped main electrodes (4,4a,5,5a) having silicon oxide films respectively.

5. (Currently Amended) The capacitance type liquid sensor according to claim 3, ~~wherein characterized in that~~ the cylindrical container is formed into a square cylindrical shape and has two pairs of parallel sides, the four parallel sides having openings closed by plate-shaped main electrodes (4, 4a, 5, 5a) having silicon oxide films respectively.

6. (Currently Amended) The capacitance type liquid sensor according to claim 3, ~~wherein or 5, characterized in that~~ the bottoms (23, 24) of the notches are formed with grooves [(29)] respectively and the sealing agent [(28)] fills for fluid tightness spaces defined between the grooves and the plate-shaped main electrodes respectively.

7. (Currently Amended) The capacitance type liquid sensor according to claim 3, ~~wherein or 5, characterized in that~~ an entire or a part of the lower lid [(12)] is made from an electrically conductive material to serve as an auxiliary electrode, instead of the metal auxiliary electrode [(8)].

8. (Currently Amended) The capacitance type liquid sensor according to claim 2, ~~wherein to 5, characterized in that~~ an entire side of the plate-shaped main electrode facing an outside of the container is covered with a sealing agent.

9. (Currently Amended) The capacitance type liquid sensor according to claim 2, ~~wherein to 5, characterized in that~~ the sealing agent comprises a glass having a low melting point ~~is used as the sealing agent.~~

10. (Currently Amended) A capacitance type liquid sensor comprising:
~~characterized by~~

a closed container; (48);

an electrically conductive liquid [(42)] having an amount equal to substantially one-half of an inside volume of the container and filling the container; [(,)]

a pair of lead terminals (44, 45) extending through one of ends of the container and fixed to the container so as to be electrically insulated from the container; [(,)]

a plurality of main electrodes ~~(46, 47)~~ having surfaces formed with silicon oxide films and mounted on distal ends of the lead terminals, respectively, the main electrodes being provided so that parts of the main electrodes are located on a liquid surface of the conductive liquid when the container is stationary;[[,]] and

an auxiliary electrode electrically conductively brought into contact with the conductive liquid.

11. (Currently Amended) The capacitance type liquid sensor according to claim 10, ~~wherein characterized in that~~ two pairs of the lead terminals extend through said one end of the container and are fixed to the container, instead of one pair, the main electrodes are mounted on distal ends of the lead terminals respectively, and imaginary lines connecting centers of the respective paired main electrodes intersect perpendicularly to each other.

12. (Currently Amended) The capacitance type liquid sensor according to claim 10, ~~wherein or 11, characterized in that~~ the main electrodes are formed into a shape of a short strip and two main electrode sides of each pair are opposed to each other so that imaginary lines connecting centers of the respective paired main electrodes are perpendicular to the sides of the respective paired main electrodes.

13. (Currently Amended) The capacitance type liquid sensor according to claim 10, ~~wherein or 11, characterized in that~~ the main electrodes are formed into a shape of a short strip and are disposed radially so that angles made by the surfaces of the main electrodes ~~sides~~ adjacent to each other are equal to each other.

14. (Currently Amended) The capacitance type liquid sensor according to claim 10, ~~wherein or 11, characterized in that~~ the auxiliary electrode is the closed container made from an electrically conductive material.

15. (Currently Amended) The capacitance type liquid sensor according to claim 10, ~~wherein or 11, characterized in that~~ the auxiliary electrode extends through one of ends of the container and is fixed to the container.

16. (Currently Amended) The capacitance type liquid sensor according to claim ~~any one of claims 2, wherein to 5, 10 and 11, characterized in that~~ each main electrode is made from any one of single crystal silicon, amorphous silicon, and polycrystalline silicon.

17. (Currently Amended) The capacitance type liquid sensor according to claim ~~any one of claims 2, wherein to 5, 10 and 11, characterized in that~~ the conductive liquid is made from any one or a combination of two or more of an alcohol group including methyl alcohol, ethyl alcohol and isopropyl alcohol, a ketone group including acetone and methyl ethyl ketone[[,]] and an ether group including diethylene glycol mono-butyl ether ~~and the like~~ with addition of an electrolyte including lithium nitrate[[,]] or potassium iodide ~~or the like~~.

18. (Currently Amended) The capacitance type liquid sensor according to claim ~~any one of claims 2, wherein to 5, 10 and 11, characterized in that~~ the closed container contains an inert gas ~~is contained in the closed container~~.

19. (New) The capacitance type liquid sensor according to claim 5, wherein the bottoms of the notches are formed with grooves respectively and the sealing agent fills for fluid tightness spaces defined between the grooves and the plate-shaped main electrodes respectively.

20. (New) The capacitance type liquid sensor according to claim 5, wherein an entire or a part of the lower lid is made from an electrically conductive material to serve as an auxiliary electrode, instead of the metal auxiliary electrode.

21. (New) The capacitance type liquid sensor according to claim 3, wherein an entire side of the plate-shaped main electrode facing an outside of the container is covered with a sealing agent.

22. (New) The capacitance type liquid sensor according to claim 4, wherein an entire side of the plate-shaped main electrode facing an outside of the container is covered with a sealing agent.

23. (New) The capacitance type liquid sensor according to claim 5, wherein an entire side of the plate-shaped main electrode facing an outside of the container is covered with a sealing agent.

24. (New) The capacitance type liquid sensor according to claim 3, wherein the sealing agent comprises a glass having a low melting point.

25. (New) The capacitance type liquid sensor according to claim 4, wherein the sealing agent comprises a glass having a low melting point.

26. (New) The capacitance type liquid sensor according to claim 5, wherein the sealing agent comprises a glass having a low melting point.

27. (New) The capacitance type liquid sensor according to claim 11, wherein the main electrodes are formed into a shape of a short strip and two main electrode sides of each pair are opposed to each other so that imaginary lines connecting centers of the respective paired main electrodes are perpendicular to the sides of the respective paired main electrodes.

28. (New) The capacitance type liquid sensor according to claim 11, wherein the main electrodes are formed into a shape of a short strip and are disposed radially so that angles made by the main electrode sides adjacent to each other are equal to each other.

29. (New) The capacitance type liquid sensor according to claim 11, wherein the auxiliary electrode is the closed container made from an electrically conductive material.

30. (New) The capacitance type liquid sensor according to claim 11, wherein the auxiliary electrode extends through one of ends of the container and is fixed to the container.

31. (New) The capacitance type liquid sensor according to claim 3, wherein each main electrode is made from any one of single crystal silicon, amorphous silicon, and polycrystalline silicon.

32. (New) The capacitance type liquid sensor according to claim 4, wherein each main electrode is made from any one of single crystal silicon, amorphous silicon, and polycrystalline silicon.

33. (New) The capacitance type liquid sensor according to claim 5, wherein each main electrode is made from any one of single crystal silicon, amorphous silicon, and polycrystalline silicon.

34. (New) The capacitance type liquid sensor according to claim 10, wherein each main electrode is made from any one of single crystal silicon, amorphous silicon, and polycrystalline silicon.

35. (New) The capacitance type liquid sensor according to claim 11, wherein each main electrode is made from any one of single crystal silicon, amorphous silicon, and polycrystalline silicon.

36. (New) The capacitance type liquid sensor according to claim 3, wherein the conductive liquid is made from any one or a combination of two or more of an alcohol group including methyl alcohol, ethyl alcohol and isopropyl alcohol, a ketone group including acetone and methyl ethyl ketone, an ether group including diethylene glycol mono-butyl ether

and the like with addition of an electrolyte including lithium nitrate, potassium iodide or the like.

37. (New) The capacitance type liquid sensor according to claim 4, wherein the conductive liquid is made from any one or a combination of two or more of an alcohol group including methyl alcohol, ethyl alcohol and isopropyl alcohol, a ketone group including acetone and methyl ethyl ketone, an ether group including diethylene glycol mono-butyl ether and the like with addition of an electrolyte including lithium nitrate, potassium iodide or the like.

38. (New) The capacitance type liquid sensor according to claim 5, wherein the conductive liquid is made from any one or a combination of two or more of an alcohol group including methyl alcohol, ethyl alcohol and isopropyl alcohol, a ketone group including acetone and methyl ethyl ketone, an ether group including diethylene glycol mono-butyl ether and the like with addition of an electrolyte including lithium nitrate, potassium iodide or the like.

39. (New) The capacitance type liquid sensor according to claim 10, wherein the conductive liquid is made from any one or a combination of two or more of an alcohol group including methyl alcohol, ethyl alcohol and isopropyl alcohol, a ketone group including acetone and methyl ethyl ketone, an ether group including diethylene glycol mono-butyl ether and the like with addition of an electrolyte including lithium nitrate, potassium iodide or the like.

40. (New) The capacitance type liquid sensor according to claim 11, wherein the conductive liquid is made from any one or a combination of two or more of an alcohol group including methyl alcohol, ethyl alcohol and isopropyl alcohol, a ketone group including acetone and methyl ethyl ketone, an ether group including diethylene glycol mono-butyl ether and the like with addition of an electrolyte including lithium nitrate, potassium iodide or the like.

41. (New) The capacitance type liquid sensor according to claim 3, wherein the closed container contains an inert gas.

42. (New) The capacitance type liquid sensor according to claim 4, wherein the closed container contains an inert gas.

43. (New) The capacitance type liquid sensor according to claim 5, wherein the closed container contains an inert gas.

44. (New) The capacitance type liquid sensor according to claim 10, wherein the closed container contains an inert gas.

45. (New) The capacitance type liquid sensor according to claim 11, wherein the closed container contains an inert gas.